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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,054	02/25/2004	Jung Ho Song	P69538US0	8562
43569	7590	05/06/2005		
MAYER, BROWN, ROWE & MAW LLP 1909 K STREET, N.W. WASHINGTON, DC 20006			EXAMINER DICKY, THOMAS L	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/785,054

Applicant(s)

SONG ET AL.

Examiner

Thomas L. Dickey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 10-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 12-16 is/are allowed.
- 6) ☒ Claim(s) 1, 4 and 5 is/are rejected.
- 7) ☒ Claim(s) 2, 3 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Minhloan Tran
Minhloan Tran
Primary Examiner
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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. The amendment filed on 03/08/2005 has been entered.

Claim Objections

2. Claim 2 is objected to under 37 CFR 1.75 as being a substantial duplicate (except for being in dependent form, claim 2 is a word-for-word duplicate of claim 10) of claim 10. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

3. Claims 3 and 11 are objected to under 37 CFR 1.75 as being a substantial duplicate (except for being in dependent form, claims 3 and 11 are a word-for-word duplicates of each other and of claim 14) of claim 14. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

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Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,4, and 5 stand rejected under 35 U.S.C. 102(b) as being anticipated by PAOLI (5,742,631).

Paoli discloses a semiconductor device with a substrate 102 etched into a mesa structure 500; an active layer 134 formed on the mesa structure 500 and being a core of a waveguide; a first clad layer 136 formed on the active layer 134; a current blocking layer 124 formed on the etched substrate 102 in both sides of the mesa structure 500; an etch-stop layer 502 formed on (i.e., above) the first clad layer 136 and the current blocking layer 124; a second clad layer 137 formed on the etch-stop layer 502 being located on an upper portion of the mesa structure 500 with a predetermined width; an ohmic contact layer 138 formed on the second clad layer 137; a first electrode 148 contacted with the ohmic contact layer; a second electrode 147 formed on the bottom of the substrate 102, and a layer 139 for planarization in both sides of the second clad layer 137 and the ohmic contact layer, wherein the second clad layer 137 may be (it may be of either conduction type, note column 7 lines 35-36) a p type semiconductor

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layer. Note figure 5 and column 5 lines 38-42, column 7 lines 35-36 and 51-63, and column 8 lines 1-13 of Paoli.

Allowable Subject Matter

5. Claims 10 and 12-16 are allowed over the references of record because none of these references disclosed or can be combined to yield the claimed invention such as a semiconductor laser, comprising a substrate etched into a mesa structure; an active layer formed on the mesa structure and being a core of a waveguide; a first clad layer formed on the active layer; a current blocking layer formed on the etched substrate in both sides of the mesa structure; an etch-stop layer formed on the first clad layer and the current blocking layer; a second clad layer formed on the etch-stop layer being located on an upper portion of the mesa structure with a predetermined width; an ohmic contact layer formed on the second clad layer; a first electrode contacted with the ohmic contact layer; and a second electrode formed on the bottom of the substrate, wherein the current blocking layer may be formed by a first p type, an n type, and a second p type semiconductor layers, wherein the second p type semiconductor layer is formed with a thickness thinner than that of the first p type semiconductor layer, as recited in both claims 10 and 14.

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Response to Arguments

6. Applicant's arguments filed 03/08/2005 have been fully considered but they are not persuasive.

It is argued, at page 6 of the remarks, that "In fact, the substrate 102, disclosed in Paoli at Figure 5, for example, is separated from the mesa structure 500 by several intervening layers."

However, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., that the substrate may not be separated from the mesa) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181; 26 USPQ2d 1057 (Fed. Cir. 1993).

Further, it should be noted that Paoli's substrate 102 in fact has a raised, or mesa, structure etched directly into the substrate, between the grooves seen below marked parts 141. The making of this raised structure is described at column 5 lines 30-39.

Conclusion

7. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas L Dickey whose telephone number is 571-272-1913. The examiner can normally be reached on Monday-Thursday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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